

In the Claims:

Please amend the claims as follows:

1. (currently amended) A hydraulic coupling device, comprising:

a male coupling part in the form of a sealing element comprising a hollow body of metallic material with a first male sealing member formed at a first end of the body and a second male sealing member formed at a second end of the body opposite said first end, the body further comprising a single disc shaped intermediate member that forms a continuous part together with the first male sealing member and the second male sealing member and that is mechanically compressible so as to be capable of storing elastic energy when the body is subjected to axial compression, wherein an internal bore extends through the body and through the first and second male sealing members and the intermediate member, the spherical contact surface of the respective male sealing member surrounding said internal bore;

a first female coupling part provided with comprising a first female sealing member and having an internal bore extending through the coupling part and its female sealing member; and a second female coupling part provided with comprising a second female sealing member,

wherein the first male sealing member has an external spherical contact surface designed for mating with a corresponding internal conical contact surface of the first female sealing member so as to form a fluid-tight seal between the first male sealing member and the first female sealing member when their contact surfaces are pressed against each other;

wherein the second male sealing member has an external spherical contact surface

designed for mating with a corresponding internal conical contact surface of the second female sealing member so as to form a fluid-tight seal between the second male sealing member and the second female sealing member when their contact surfaces are pressed against each other;

~~wherein the body is provided with an intermediate member, which forms a continuous part together with the first and second male sealing members and which is mechanically compressible so as to be capable to store elastic energy when the body is subjected to axial compression; and~~

~~wherein an internal bore extends through the body and through the first and second male sealing members and the intermediate member, the spherical contact surface of the respective male sealing member surrounding said internal bore.~~

2. (previously amended) The hydraulic coupling device according to claim 1, wherein the first male sealing member is coaxial with the second male sealing member.

3. (previously amended) The hydraulic coupling device according to claim 1, wherein the intermediate member is expandable by an internal fluid pressure in the body so as to urge the respective male sealing member outwards in the axial direction of the body against the corresponding female sealing member when the sealing element is fitted between said female sealing members, thereby increasing the sealing contact pressure between the respective male sealing member and the corresponding female sealing member.

4. (currently amended) The hydraulic coupling device according to claim 3, 1, wherein the intermediate member has an internal cross-sectional area which is larger than the external

cross-sectional area of the respective male sealing member as seen at the point of the male sealing member where the male sealing member is designed to engage with the corresponding female sealing member.

5. (cancelled)

6. (previously amended) The hydraulic coupling device according to claim 1, wherein the second female coupling part has an internal bore extending through the coupling part and its female sealing member.

7. (previously amended) The hydraulic coupling device according to claim 1, wherein the second female coupling part is designed as a stop member adapted to close the internal bore of the male coupling part when the male coupling part is clamped between the first and second female coupling parts.

8. (currently amended) The hydraulic coupling device according to claim 1, wherein:
at least one of the first and second female coupling parts is ~~provided with~~ comprises a valve, which comprises a valve body displaceably arranged inside the internal bore of the female coupling part and a spring member acting on the valve body, the valve body being displaceable against the action of the spring member from a first position, in which the valve is closed and prevents fluid flow through the internal bore of the female coupling part, to a second position, in which the valve is open and allows fluid flow through the internal bore of the female coupling part; and

the male coupling part is provided with comprises an actuation member for displacing the valve body from said first position to said second position immediately before the female sealing member of the female coupling part is brought into engagement with the corresponding male sealing member of the male coupling part.

9. (currently amended) The hydraulic coupling device according to claim 8, wherein:
the valve comprises a housing which is immovably fixed inside the internal bore of the female coupling part, said housing being provided with comprising a cavity accommodating the spring member and a part of the valve body; and

wherein said cavity is in fluid communication with an orifice at the end of the valve facing the free end of the female sealing member of the female coupling part so as to allow the cavity to be in fluid communication with the surroundings via said orifice when the female coupling part is out of engagement with the male coupling part.

10. (previously amended) The hydraulic coupling device according to claim 9, wherein the actuation member is adapted to restrict the flow through the orifice when the female sealing member is in engagement with the corresponding male sealing member.

11. (previously amended) The hydraulic coupling device according to claim 9, wherein the cavity is in fluid communication with the orifice via a channel extending through the valve body.

12. (previously amended) The hydraulic coupling device according to claim 11, wherein

said channel extends axially through the valve body.

13. (previously amended) The hydraulic coupling device according to claim 11, wherein the actuation member is adapted to engage with the valve body so as to cover the orifice and thereby restrict the flow through the orifice when the female sealing member is in engagement with the corresponding male sealing member.

14. (currently amended) The hydraulic coupling device according to claim 8, wherein: the valve is provided with comprises a ring-shaped seal element arranged in an annular groove, which groove is provided in the inner wall of the internal bore of the female coupling part; and

an external surface of the valve body is adapted to engage with the ring-shaped seal element so as to form a fluid-tight seal between the inner wall of the internal bore and the valve body when the valve body is in said first position.

15. (previously amended) The hydraulic coupling device according to claim 8, wherein: the valve body comprises a first body part and a second body part, said first body part being located in front of the second body part as seen in a direction along the associated internal bore towards the associated female sealing member; a first flow path section is provided radially outwardly of the first body part between the valve housing and the inner wall of the internal bore, and a second flow path section is provided between the second body part and said inner wall, said first and second flow path sections extending essentially in the axial direction of the internal bore on mutually different levels as

seen in the radial direction of the internal bore;

the first flow path section is connected to the second flow path section via an intermediate flow path section extending obliquely in relation to the first and second flow path sections; and

the first body part is adapted to block the intermediate flow path section when the valve body is displaced from said second position to said first position.

16. (currently amended) The hydraulic coupling device according to claim 15, wherein the second body part has a smaller cross-sectional area than the first body part, that wherein the second body part is surrounded by the ring-shaped seal element and out of engagement therewith when the valve body is in said second position, that wherein an external surface of the first body part is adapted to be brought into engagement with the ring-shaped seal element so as to form a fluid-tight seal between the inner wall of the internal bore and the valve body when the valve body is displaced from said second position to said first position, and that wherein the end of the first body part facing the second body part only has blunt edges so that the ring-shaped seal element will meet no sharp edge when the valve body is displaced between said positions.

17. (previously amended) The hydraulic coupling device according to claim 15, wherein the intermediate flow path section is defined partly by an external surface of the valve body which extends obliquely, as seen in the axial direction of the valve body, between the first body part and the second body part.

18. (withdrawn) A valve device, comprising:

a first valve part provided with a first female sealing member and having an internal bore extending through the valve part and its female sealing member,

a second valve part provided with a second female sealing member, and

a sealing element interposed between the first female sealing member and the second female sealing member, wherein the sealing element comprises a hollow body of metallic material with a first male sealing member formed at a first end of the body and a second male sealing member formed at a second end of the body opposite said first end, the respective male sealing member having an external spherical contact surface;

wherein an internal bore extends through the body and through the first and second male sealing members, the spherical contact surface of the respective male sealing member surrounding said internal bore;

wherein the first female sealing member has an internal conical contact surface of metallic material for engagement with the spherical contact surface of the first male sealing member, the spherical contact surface of the first male sealing member and the corresponding conical contact surface of the first female sealing member being designed to form a fluid-tight seal between the sealing element and the first valve part when said contact surfaces are pressed against each other; and

wherein the second female sealing member is provided with an internal conical contact surface of metallic material for engagement with the spherical contact surface of the second male sealing member, the spherical contact surface of the second male sealing member and the corresponding conical contact surface of the second female sealing member being designed to form a fluid-tight seal between the sealing element and the second valve part when said contact surfaces are pressed against each other.

19. (withdrawn) The valve device according to claim 18, wherein the first valve part and the second valve part are displaceable in relation to each other in the axial direction of the body of the sealing element between a first position, in which the contact surface of both male sealing members is pressed against its corresponding contact surface of the female sealing members, and a second position, in which the contact surface of at least one of the male sealing members is out of engagement with its corresponding contact surface of the female sealing members.

20. (withdrawn) The valve device according to claim 19, wherein the contact surface of the second male sealing member is out of engagement with the corresponding contact surface of the second female sealing member, whereas the contact surface of the first male sealing member is in engagement with the corresponding contact surface of the first female sealing member, when the first and second valve parts are in said second position.

21. (withdrawn) The valve device according to claim 19, wherein the valve device is provided with a flow channel, which is connected to the internal bore of the first valve part via the space between the first female sealing member and the second female sealing member, and wherein said flow channel is in fluid communication with the internal bore of the first valve part when the first and second valve parts are in said first position, whereas said flow channel is not in fluid communication with the internal bore of the first valve part when the first and second valve parts are in said second position.

22. (withdrawn) The valve device according to claim 18, wherein the valve device

constitutes a subsea valve.

23. (withdrawn) The valve device according to claim 18, wherein the first male sealing member is coaxial with the second male sealing member.

24. (withdrawn) The valve device according to claim 18, wherein the body is provided with an intermediate member, which forms a continuous part together with the first and second male sealing members and which is mechanically compressible so as to be capable to store elastic energy when the body is subjected to axial compression, and wherein the internal bore extends through said intermediate member.

25. (withdrawn) The valve device according to claim 24, wherein the intermediate member is expandable by an internal fluid pressure in the body so as to urge the respective male sealing member outwards in the axial direction of the body against the corresponding female sealing member when the sealing element is fitted between said female sealing members, thereby increasing the sealing contact pressure between the respective male sealing member and the corresponding female sealing member.

26. (withdrawn) The valve device according to claim 25, wherein the intermediate member has an internal cross-sectional area which is larger than the external cross-sectional area of the respective male sealing member as seen at the point of the male sealing member where the male sealing member is designed to engage with the corresponding female scaling member.

27. (withdrawn) The valve device according to claim 24, wherein the intermediate member is essentially shaped as a single or multiple wave bellows.

28. (withdrawn) The hydraulic coupling device according to claim 1, wherein the hydraulic coupling device comprises a hydraulic subsea coupling device.

29. (new) A multi-bore arrangement for simultaneous connection of two or more coupling devices, each coupling device comprising:

a male coupling part in the form of a sealing element comprising a hollow body of metallic material with a first male sealing member formed at a first end of the body and a second male sealing member formed at a second end of the body opposite said first end, the body further comprising a single disc shaped intermediate member that forms a continuous part together with the first male sealing member and the second male sealing member and that is mechanically compressible so as to be capable of storing elastic energy when the body is subjected to axial compression, wherein an internal bore extends through the body and through the first and second male sealing members and the intermediate member, the spherical contact surface of the respective male sealing member surrounding said internal bore;

a first female coupling part comprising a first female sealing member and having an internal bore extending through the coupling part and its female sealing member; and

a second female coupling part comprising a second female sealing member,

wherein the first male sealing member has an external spherical contact surface designed for mating with a corresponding internal conical contact surface of the first female sealing member so as to form a fluid-tight seal between the first male sealing member and the first

female sealing member when their contact surfaces are pressed against each other;
wherein the second male sealing member has an external spherical contact surface
designed for mating with a corresponding internal conical contact surface of the second female
sealing member so as to form a fluid-tight seal between the second male sealing member and the
second female sealing member when their contact surfaces are pressed against each other.